

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended): Gasoline internal combustion engine with controlled ignition comprising at least one cylinder, a cylinder head closing the cylinder, a piston slidably arranged in the cylinder, a combustion chamber defined in the cylinder between an upper face of the piston and a lower face of the cylinder head, means for injecting gasoline, ignition means intended to produce an ignition of the air-gasoline mixture in the combustion chamber, intake valves and exhaust valves selectively closing the combustion chamber, an injection pump intended to supply pressurized gasoline to the injection means, wherein the pressure of the gasoline supplied to the injection means is above 250 bars, and, at least in an operation range of the engine subject to the clicking phenomenon, the amount of gasoline supplied by the pump to the injection means ~~for a combustion cycle~~ is fractionated in the form of a plurality of partial and distinct injections during a combustion cycle, and at least one of these partial injections is delivered before ignition of the load in the combustion chamber by the ignition means, and at least one partial injection is delivered after this ignition.

2. (Previously presented): Engine according to claim 1, wherein the amount of gasoline injected before the ignition is comprised between 20 to 50% of the total amount of gasoline injected for the combustion cycle concerned.

3. (Previously presented): Engine according to claim 1, wherein the amount of gasoline delivered by the pump to the injection means for a combustion cycle comprises, before ignition of the load, between one and ten distinct partial injections.

4. (Previously presented): Engine according to claim 1, wherein the amount of gasoline delivered by the pump to the injection means for a combustion cycle comprises, after ignition of the load, between one and ten distinct partial injections.

5. (Previously presented): Engine according to claim 1, wherein, when the engine speed is comprised between 750 and 4,500 revolutions/min approximately, the amount of gasoline delivered by the pump to the injection means for a combustion cycle is fractionated in the form of a plurality of partial and distinct injections.

6. (Previously presented): Engine according to claim 1, wherein, when the engine is in a so-called high speed range of operation, comprised for example between 4,000 and 7,000 revolutions/min, the amount of gasoline delivered by the pump to the injection means for a combustion cycle is delivered in the form of a single injection or fractionated in the form of a plurality of partial and distinct injections.

7. (Previously presented): Engine according to claim 6, wherein the amount of gasoline delivered by the pump to the injection means is delivered in the form of an injection of short duration, i.e., of a duration comprised between ten and one hundred degrees crankshaft approximately.

8. (Previously presented): Engine according to claim 1, wherein the engine has a four-stroke or two-stroke combustion cycle.

9. (Previously presented): Engine according to claim 1, wherein the engine is an indirect injection engine.

10. (Previously presented): Engine according to claim 1, wherein the engine is a direct injection engine.

11. (Previously presented): Engine according to claim 10, wherein the partial injection or injections injected before the ignition are delivered by the pump in a time interval close to the combustion high dead center.

12. (Previously presented): Engine according to claim 1, wherein the pressure of the gasoline supplied to the injection means is comprised between 250 and 2,500 bars.

13. (Previously presented): Engine according to claim 12, wherein the pressure of the gasoline supplied to the injection means is comprised between 300 and 2,000 bars.

14. (Previously presented): Engine according to claim 5, wherein, when the engine speed is comprised between 1,000 and 4,000 revolutions/min, the amount of gasoline delivered by the pump to the injection means for a combustion cycle is fractionated in the form of a plurality of partial and distinct injections.

15. (Previously presented): Engine according to claim 1, wherein the pressure of the gasoline supplied to the injection means is more than 300 bars.

16. (Previously presented): Engine according to claim 1, wherein the pressure of the gasoline supplied to the injection means is more than 300 bars and up to 2,000 bars.

17. (Currently amended): Method of controlling ignition in a gasoline internal combustion engine comprising at least one cylinder, a cylinder head closing the cylinder, a piston slidably arranged in the cylinder, a combustion chamber defined in the cylinder between an upper face of the piston and a lower face of the cylinder head, means for injecting gasoline, ignition means intended to produce an ignition of the air-gasoline mixture in the combustion chamber, intake valves and exhaust valves selectively closing the combustion chamber, an

injection pump intended to supply pressurized gasoline to the injection means, said method comprising:

at least in an operation range of the engine subject to the clicking phenomenon, supplying an amount of gasoline to the injection means, said gasoline amount being fractionated in the form of a plurality of partial and distinct injections ~~for~~ during a combustion cycle,

wherein at least one of these partial injections is delivered before ignition of the load in the combustion chamber by the ignition means, and at least one partial injection is delivered after this ignition, and

wherein the gasoline amount is supplied to the injection means at a pressure above 250 bars.

18. (Previously presented): Method according to claim 17, wherein the amount of gasoline injected before the ignition is comprised between 20 to 50% of the total amount of gasoline injected for the combustion cycle concerned.

19. (Previously presented): Method according to claim 17, wherein the amount of gasoline delivered by the pump to the injection means for a combustion cycle comprises, before ignition of the load, between one and ten distinct partial injections.

20. (Previously presented): Method according to claim 17, wherein the amount of gasoline delivered by the pump to the injection means for a combustion cycle comprises, after ignition of the load, between one and ten distinct partial injections.

21. (Previously presented): Method according to claim 17, wherein, when the engine speed is comprised between 750 and 4,500 revolutions/min approximately, the amount of gasoline delivered by the pump to the injection means for a combustion cycle is fractionated in the form of a plurality of partial and distinct injections.

22. (Previously presented): Method according to claim 17, wherein, when the engine is in a so-called high speed range of operation, comprised for example between 4,000 and 7,000 revolutions/min, the amount of gasoline delivered by the pump to the injection means for a combustion cycle is delivered in the form of a single injection or fractionated in the form of a plurality of partial and distinct injections.

23. (Previously presented): Method according to claim 22, wherein the amount of gasoline delivered by the pump to the injection means is delivered in the form of an injection of short duration, i.e., of a duration comprised between ten and one hundred degrees crankshaft approximately.